California

Science and Engineering Profile

Characteristic	State	U.S.	Rank	Characteristic	State	U.S.	Rank
Doctoral scientists, 1999[1]	66,800	518,670	1	Total R&D performance, 1998 (millions)	$43,919	$214,668	1
Doctoral engineers, 1999[1]	19,980	107,100	1	Industry R&D, 1998 (millions)	$35,568	$163,480	1
S&E doctorates awarded, 1999[1]	3,344	25,953	1	Academic R&D, 1998 (millions)	$3,302	$25,342	1
of which, in engineering	22%	21%		of which, in life sciences	57%	57%	
in life sciences	21%	25%		in engineering	15%	16%	
in psychology	17%	14%		in physical sciences	12%	9%	
S&E postdoctorates, 1998[1]				Public higher education current-fund			
in doctorate-granting institutions	7,127	39,494	1	expenditures, 1997 (millions)	$15,707	$125,236	1
S&E graduate students, 1998[1]				Number of SBIR awards, 1990-98	7,892	35,413	1
in doctorate-granting institutions	43,554	422,834	1	Patents issued to state residents, 1999	16,774	83,901	1
Population, 1999 (thousands)	33,145	276,580	1	Gross state product, 1998 (billions)	$1,119	$8,800	1
Civilian labor force, 1999 (thousands)	16,586	140,536	1	of which, agriculture	2%	1%	
				manufacturing, mining, construction	18%	22%	
Personal income per capita, 1999	$29,910	$28,542	14	transportation, communication, utilities	7%	9%	
				wholesale and retail trade	16%	16%	
Federal spending				finance, insurance, real estate	22%	19%	
Total expenditures, 1999 (millions)	$166,050	$1,508,933	1	services	23%	21%	
R&D obligations, 1998 (millions)	$12,216	$70,445	1	government	11%	12%	

NOTE: Rankings and totals are based on data for the 50 States, District of Columbia, and Puerto Rico. Reliability of the estimates of industry R&D and of doctoral scientists and engineers varies by State, because the sample allocation was not based on geography. The rankings do not take into account the margin of error of estimates from sample surveys.

[1]Data on graduate students, doctoral scientists and engineers, and postdoctorates include all graduate degree (except M.D.) candidates and recipients in S&E fields, including health fields. Data on S&E doctorates awarded do not include health fields.

Federal Obligations for Research and Development by Agency and Performer: Fiscal Year 1998

Agency	Performer							
	Total	Federal Intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank, total
	[In thousands of dollars]							
Total, all agencies	12,215,846	1,595,270	2,151,672	5,937,882	1,886,772	519,452	124,798	1
Department of Agriculture	78,512	57,938	0	0	20,113	461	0	3
Department of Commerce	80,711	18,401	0	53,469	7,610	534	697	3
Department of Defense	6,436,570	1,168,340	174,617	4,744,858	220,178	31,144	97,433	1
Department of Energy	1,022,019	7,432	816,775	73,968	109,613	14,231	0	2
Dept. of Health & Human Services	1,529,761	5,225	36,719	121,515	1,009,445	355,107	1,750	2
Department of the Interior	36,965	25,964	0	1,047	9,455	22	477	3
Department of Transportation	23,566	951	0	5,743	4,676	1,461	10,735	6
Environmental Protection Agency	31,969	0	0	1,086	23,237	821	6,825	4
National Aeronautics and Space Admin	2,628,415	310,808	1,123,235	924,573	168,470	94,448	6,881	1
National Science Foundation	347,358	211	326	11,623	313,975	21,223	0	1
State rank, total	1	3	1	1	1	2	1	na

NOTE: Federal R&D obligations are as reported by funding agencies. Ranks and totals are based on data for the 50 States, District of Columbia, and Puerto Rico.

KEY: FFRDC = federally funded research and development center; SBIR = small business innovation research; na = not applicable.

SOURCES: Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources -- see the section, "Data Sources for Science and Engineering (S&E) State Profiles".